ThermoRetec Nuclear Services
Rocky Flats Environmental Technology Site
T886D
10808 Highway 93, Unit B
Golden, CO 80403-8200

April 10, 2000

Chuck Hoelzel
Kaiser-Hill, L.L.C.
Rocky Flats Environmental Technology Site
Analytical Services
10808 Highway 93, Unit B
Golden, CO 80403

ThermoRetec
Smart Solutions. Positive Outcomes.

(303) 966-6860 Phone
(303) 966-4303 Fax
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RIN Number: **00R0975**
Lab Code: TNU
Subcontract No. KH700093EP6

COVER PAGE

Chuck,

Enclosed please find the data package documenting the processing and analysis of 4 Special Air Monitoring cartridges collected on April 6th . These samples were fiberglass filters used for air monitoring during the test burn in the RFETS Buffer Zone. This data package constitutes the final report for this RIN. An EDD, in compliance with specifications provided by Radian International Air Monitoring Group, was e-mailed to JoAnn Euler, Radian, on April 10, 2000.

These samples were logged into the new LIMS system and analyzed on the upgraded TNU Air Filter Counting System (AFCS) System. The filters were processed and analyzed as follows: A 2" diameter circle was punched out of each fiberglass filter and the punched out piece was counted for gross alpha and gross beta activities on the AFCS System (LIC OS01A12). The data were faxed to JoAnn Euler on 4/10/2000. The COC received with these samples indicated that a Rush TAT was required. However, in discussions with Kaiser-Hill Analytical Services and Radian Air Quality Monitoring personnel during the planning phase of this project, it had been determined that the filters should be held for a minimum of 48 hours after exposure prior to counting to allow for decay of radon progeny. This would not be possible with a Rush TAT (24 hours). Matt Graves, Analytical Services, was contacted for clarification of the required TAT. He indicated that the filters should be counted on April 10 and issued an Additional Analyte Request Form to change the TAT from Rush to Routine.

"I certify that this sample data package is in compliance with SOW requirements, both technically and for completeness, other than the conditions detailed above. Release of the data contained in this hard-copy sample data package and the computer-readable EDD, as applicable, submitted on diskette or by modem, has been authorized by the laboratory manager or the manager's designee, as verified by the following signature."

Laboratory Manager

4/10/2000
Date

Data Package Review Signature Page

Kathy Hagglund
Technical Review

4/10/2000
Date

D. [illegible] for P. Newton
Quality Assurance Review

4/10/2000
Date

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CHAIN - OF - CUSTODY

Radian

RFETS

CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST

C.O.C. # 00R0975#001

Page 1 of 1

Sampler(s) (time/date)	Contact/Requester: GRAVES, MATT / HAINES, PATRICK	Telephone No.: 3054 MSIN: FAX:
RIN: 00R0975	Sampling Origin: Southwest Buffer Zone	Purchase Order/Charge Code: NH121000
Project Title: Filters from the test burn	Logbook No.:	Ice Chest No.: Temp.:
To (Lab): Thermo NuTech	Method of Shipment:	Bill of Lading/Air Bill No.:
Protocol	Related COC (if any):	PRE

POSSIBLE SAMPLE HAZARDS/REMARKS
Are acid preserved samples DOT hazardous per 40 CFR Part 136.3 Table II? YES or (NO)
Are other known hazardous substances present? YES or (NO)
** ** **

SCREENING REQUIRED ☐

SPECIAL INSTRUCTIONS Hold Time Total Activity Exemption: Yes ☐ No ☐
SPLIT FILTERS PRIOR TO ANALYSIS PER DOE REQUEST (HALF RETAINED BY AQM)

Bottle No.	Customer Number	Matrix	Date	Time	Location	Container (size/type/quantity)	Sample Analysis	Preservative; Packing
00R0975-001.001	AQM-TB-H1	AIRFILTER	4/6/00	1046	Southwest Buffer Zone	1-FILTER / P /1	OS01A012 (AirFilter Punch & Count) [Rush]	None None
00R0975-002.001	AQM-TB-H2	AIRFILTER	4/6/00	1102	Southwest Buffer Zone	1-FILTER / P /1	OS01A012 (AirFilter Punch & Count) [Rush]	None None
00R0975-003.001	AQM-TB-H3	AIRFILTER	4/6/00	1102	Southwest Buffer Zone	1-FILTER / P /1	OS01A012 (AirFilter Punch & Count) [Rush]	None None
00R0975-004.001	AQM-TB-HB	AIRFILTER	4/6/00	1105	Southwest Buffer Zone	1-FILTER / P /1	OS01A012 (AirFilter Punch & Count) [Rush]	None None

Relinquished By: PATRICK HAINES Date/Time 4/7/00 13:42	Received By: Date/Time 4/7/00	Relinquished By: Date/Time	Received By: Date/Time		
Relinquished By: Date/Time 4/7/00 1345	Received By: E4 Date/Time 4/7/00 1345	Relinquished By: Date/Time	Received By: Date/Time		
Relinquished By: Date/Time	Received By: Date/Time	Relinquished By: Date/Time	Received By: Date/Time		
Relinquished By: Date/Time	Received By: Date/Time	Relinquished By: Date/Time	Received By: Date/Time		

FINAL SAMPLE DISPOSITION: Disposal Method (e.g., returned to customer, disposed of per lab procedure, used in analytical process) Disposed By Date/Time

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Additional Analyte Request Form

Report Identification Number (RIN) 00R0975

Please change TAT from RUSH to Routine for all events on This RIN.

Additions Authorized By: Matthew W. [signature] Date: 04/07/00

Copies of analyte additions and deletions must be sent to both ASD and Lab offices.

Send Confirmation

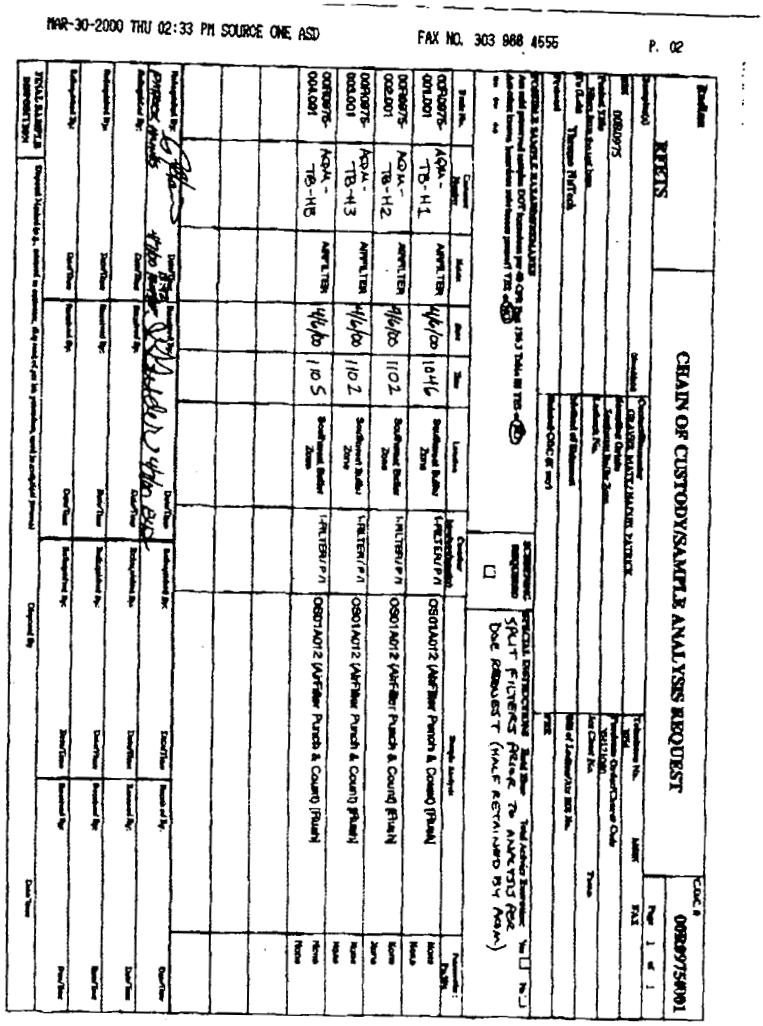
WorkCentre 450c report for
RECFAX
3039666595
Apr-07-00 01:47 PM

Successful

Pages scanned 1
Pages confirmed 1

Job	Sent	To Remote Station	Duration	Mode	Pages	Results
329	Apr-07 01:46pm	303 966 4555	00:46	ECM	1/ 1	OK,144

$$$ Phone charge code	F Forward	P Poll	48 4800 bps chosen
A Auto-distribute	G Group dial	PC to/from PC	96 9600 bps chosen
C Cover page	M Mailbox	PW Password	144 14400 bps chosen
ECM Error Correction		RM Receive to memory	



CASE NARRATIVE

Thermo Retec-Rocky Flats
RFETS, Building T886D
Golden, Colorado 80403
(303) 966-7765

Method Summary

Special ambient air filter cartridges are used to monitor air conditions on and around the Rocky Flats Environmental Technology Site (RFETS) in support of various remediation projects which may have the potential to cause airborne contamination. The exposed filter media is delivered to Thermo Retec - Rocky Flats by Site personnel. The filters are then held for a minimum of 48 hours after the OFF date to allow for decay of radon progeny before counting.

A 2" diameter circle is punched out of the fiberglass filter, and the punched out piece is analyzed for gross alpha and gross beta activities using the Air Filter Counting System, as described in Thermo Retec Procedure ATP-021, *"Operation of the Thermo Retec Air Filter Counting System."* This instrument is an array of surface barrier detectors which are operated at ambient pressure. During the analysis, the filters are loaded onto a transport, which when inserted into the instrument, positions each filter under the appropriate detector in a 32 detector array. The filters are counted for a preset length of time and the acquired spectrum is integrated into four regions of interest; beta, degraded alpha, alpha, and hi-energy alpha. The beta and alpha ROIs are used to calculate the reported activities. After the gross alpha/beta analysis is completed, the punched out piece of filter is placed with the original filter.

The laboratory is in the process of upgrading the Air Filter Counting Systems. This RIN includes data generated using the upgraded TNU Air Filter Counting System. There were changes made in the report format and reporting units as part of the system upgrade. The reporting units were changed from pCi/m^3 to dpm/filter. The confidence level of the reported uncertainty was changed from 1σ to 95%. Additionally, the measurement uncertainties calculated on the TNU AFCS system are separated into two terms; the counting uncertainty and total propagated uncertainty (TPU). The counting uncertainty is calculated by propagating all sources of uncertainty associated with the measurement process in the laboratory, including statistical counting uncertainty for backgrounds, calibration sources and sample filters. The uncertainty of the standard value for the source used to measure the detector efficiency is also included in the counting uncertainty. The total propagated uncertainty (TPU) includes the counting uncertainty and other sources of uncertainty associated with the sample collection process such as flow rates, exposure time, etc. Both uncertainties are reported at the 95% confidence limit. The counting uncertainty and TPU for filters reported in dpm will be equal since there are no terms in the calculations which are dependent on sample collection parameters, such as exposure time, flow rate, etc. The theoretical minimum detectable activity (MDA) for the analysis is based on the detector background, detector efficiency, and count time. The MDA is reported at the 95% confidence level.

Action levels have been established for alpha activity and/or beta activity, as applicable for the project. If the activity measured for a filter exceeds the applicable action level, the results will be flagged with a QC flag. The QC flag will be an "A" if the alpha activity exceeds the alpha action level and/or a "B" if the beta activity exceeds the beta action level. A filter with either or both of these two QC flags requires immediate notification of the designated contact for the program, as described in procedure ATP-021. This evaluation is not performed if the Action Level is set to 0.

Quality Control Summary

The TNU AFCS system is electronically aligned quarterly according to ATP-020, *"Electronic Alignment of the Thermo Retec Air Filter Counting System."* The detector counting efficiencies are determined monthly using ^{239}Pu sources for alpha and $^{90}Sr/^{90}Y$ sources for beta as described in procedure ATP-021, *"Operation of the Thermo Retec Air Filter Counting System."* These sources were prepared from certified reference materials which are traceable to the National Institute of Standards Technology (NIST). The applicable efficiency calibration reports are included in this data package with the analysis data.

The daily instrument QC includes determining instrument backgrounds and checking detector performance by measuring alpha and beta efficiencies (efficiency checks). The results of the daily instrument background determination are used to calculate results each day. The results of the efficiency checks are used only to verify proper instrument operation. The results of the instrument background and efficiency checks are compared to established control limits. The instrument operating software automatically sets the operational status of the detectors to "BAD" if any of the QC data for a detector are not within the required ranges. Air filter samples can not be assigned to detectors with a status of "BAD." Copies of

Thermo Retec-Rocky Flats
RFETS, Building T886D
Golden, Colorado 80403
(303)966-7765

RIN: 00R0975
Report Date: 04/10/2000

Quality Control Summary (continued)

the daily instrument backgrounds and daily efficiency checks are included in this data package for each day that filters were analyzed. A copy of the documentation for backgrounds and efficiencies are included in this data package. Originals can be found in the data packages for the routine Room Airs, which are counted on the AFCS during the same period. For informational purposes, these Room Air data packages are submitted with the following RIN format: yyKmmdd; where "yy" is the site fiscal year, "K" denotes routine Room Air program, "mm" is the month and "dd" is the date of the last day in the week (Saturday). For example, the original QC documentation for filters counted during the week of January 4, 1999 would be found with the data package for RIN 99K0109.

There are two QC flags which are used to monitor the quality of the accumulated spectra. The instrument operating software has a built-in "dead-time" monitor which is used to automatically stop the acquisition on detectors with excessive dead-time so that the dead-time will not adversely effect the data being collected from other detectors on the same MCB. A QC flag of "X" signifies that the count was stopped before the preset count time was met. The second QC flag, "D", is set if the alpha spectrum is determined to be degraded by comparing the counts in the degraded alpha ROI to the counts in the alpha ROI. Filters with a QC flag of "X" are recounted and any data flagged with an "X" are not reported. Filters with a QC flag of "D" are reported and the QC flag "D" is included on the report.

Blank filters, identified as "NU" route, are analyzed at the end of each day that filters are counted. A set of quality control filters, spiked with a known activity of ^{239}Pu are counted monthly. Data for these QC samples are available in the laboratory files.

Narrative

There were no problems encountered while processing or analyzing these filters.

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FILTER PROCESSING BENCHSHEET

Special Ambient Air Filter
Processing Worksheet
Special Ambients - Fiberglass

(L-7124-0)

RIN: 00R0975
Subproject: MFG

Procedure: ATP-013
Fiberglass Lot # (Reload): ZM941

Lab Sample ID	Location	Date ON	Date OFF	Filters Unloaded [1]	Fiberglass Punched [2]	Cartridge Reloaded [1]	Initials	Date	Comments
1000595-01	AQM-TB-H1	04/06/2000	04/06/2000	NA	✓	NA	GaB	4/10/2000	
1000595-02	AQM-TB-H2	04/06/2000	04/06/2000	NA	✓	NA	GaB	↓	
1000595-03	AQM-TB-H3	04/06/2000	04/06/2000	NA	✓	NA	GaB	↓	
1000595-04	AQM-TB-HB	04/06/2000	04/06/2000	NA	✓	NA	GaB	↓	

COC - Transfer Description	Signature	Date/Time of Transfer	
I. Box Removed from Sample Storage	G Brazee	4/10/2000	0630
II. Filter Media Returned to Sample Storage	G Brazee	4/10/2000	0700
III. Box Relinquished to Field	NA		
IV. Box Received for Field Use	NA		

LIMS Information: [1] Unloading/Reloading LIC - OS01A11; [2] Fiberglass punch/count LIC - OS01A12

Analyst: G Brazee Date: 4/10/2000

Technical Review: KM Haglund Date: 4/10/2000

Comments: Logged in to new LIMs database. Counted on new Air Filter Count System.
Fiberglass only filters.

0011

Thermo NUtech - Rocky Flats
RFETS - Building T886D
Golden, Colorado 80402
(303) 966-6860

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AFCS DATA

EFFICIENCY CALIBRATION SUMMARY
(TNU AFCS SYSTEM)

Efficiency Calibration Report

Batch ID: AFCS3_2000_01071
Collecton Date/Time: 03/17/2000 11:25:20
System: 3
Transport: A
Analyst: Pat Larson

QC Flag Legend: B - Beta Eff exceeded control limits
A - Alpha Eff exceeded control limits
X - Detector did not complete collection

Pat Larson 3/17/00
Analyst Date

P. B. Newton 3-21-00
QA Officer Date

Detector	Detector Status	Source Type	Source ID	Live Time	True Time	Eff.	Unc 2s	LCL	UCL	QC Flag
A01	OK	Alpha	2565-99	20.00	20.60	0.143	0.003	0.11	0.19	
A02	OK	Alpha	2566-99	20.00	20.64	0.155	0.003	0.11	0.19	
A03	OK	Alpha	2567-99	20.00	20.62	0.160	0.003	0.11	0.19	
A04	OK	Alpha	2568-99	20.00	20.62	0.148	0.003	0.11	0.19	
A05	OK	Alpha	2569-99	20.00	20.60	0.141	0.003	0.11	0.19	
A06	OK	Alpha	2570-99	20.00	20.60	0.157	0.003	0.11	0.19	
A07	OK	Alpha	2571-99	20.00	20.64	0.149	0.003	0.11	0.19	
A08	OK	Alpha	2572-99	20.00	20.62	0.156	0.003	0.11	0.19	
A09	OK	Alpha	2573-99	20.00	20.60	0.149	0.003	0.11	0.19	
A10	OK	Alpha	2574-99	20.00	20.60	0.152	0.003	0.11	0.19	
A11	OK	Alpha	2575-99	20.00	20.64	0.157	0.003	0.11	0.19	
A12	OK	Alpha	2576-99	20.00	20.62	0.171	0.004	0.11	0.19	
A13	OK	Alpha	2577-99	20.00	20.55	0.149	0 003	0.11	0.19	
A14	OK	Alpha	2578-99	20.00	20.64	0.162	0.003	0.11	0.19	
A15	OK	Alpha	2579-99	20.00	20.62	0.153	0.003	0.11	0.19	
A16	OK	Alpha	2580-99	20.00	20.62	0.146	0.003	0.11	0.19	
A17	OK	Alpha	2581-99	20.00	20.55	0.131	0.003	0.11	0.19	
A18	OK	Alpha	2582-99	20.00	20.55	0.148	0.003	0.11	0.19	
A19	OK	Alpha	2583-99	20.00	20.54	0.156	0.003	0.11	0.19	
A20	OK	Alpha	2584-99	20.00	20.54	0.149	0.003	0.11	0.19	
A21	OK	Alpha	2585-99	20.00	20.55	0.154	0.003	0.11	0.19	
A22	OK	Alpha	2586-99	20.00	20.54	0.163	0.003	0.11	0.19	
A23	OK	Alpha	2587-99	20.00	20.55	0.159	0.003	0.11	0.19	
A24	OK	Alpha	2588-99	20.00	20.55	0.154	0.003	0.11	0.19	
A25	BAD									
A26	OK	Alpha	2590-99	20.00	20.55	0.145	0.003	0.11	0.19	
A27	OK	Alpha	2591-99	20.00	20.55	0.139	0.003	0.11	0.19	
A28	OK	Alpha	2592-99	20.00	20.54	0.137	0.003	0.11	0.19	
A29	OK	Alpha	2593-99	20.00	20.55	0.147	0.003	0.11	0.19	
A30	OK	Alpha	2594-99	20.00	20.55	0.145	0.003	0.11	0.19	
A31	OK	Alpha	2595-99	20.02	20.56	0.161	0.003	0.11	0.19	
A32	OFF									

COPY

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Efficiency Calibration Report

Batch ID: AFCS3_2000_01069
Collecton Date/Time: 03/17/2000 10:46:20
System: 3
Transport: A
Analyst: Pat Larson

QC Flag Legend: B - Beta Eff exceeded control limits
A - Alpha Eff exceeded control limits
X - Detector did not complete collection

Pat Larson 3/17/00
Analyst Date

P.B. Newton 3-21-00
QA Officer Date

COPY

Detector	Detector Status	Source Type	Source ID	Live Time	True Time	Eff.	Unc 2s	LCL	UCL	QC Flag
A01	OK	Beta	603431	20.00	20.06	0.244	0.025	0.23	0.38	
A02	OK	Beta	603432	20.00	20.06	0.276	0.028	0.23	0.38	
A03	OK	Beta	603433	20.00	20.06	0.280	0.028	0.23	0.38	
A04	OK	Beta	603434	20.00	20.06	0.274	0.029	0.23	0.38	
A05	OK	Beta	603435	20.00	20.06	0.272	0.027	0.23	0.38	
A06	OK	Beta	603436	20.00	20.06	0.272	0.028	0.23	0.38	
A07	OK	Beta	603437	20.00	20.06	0.256	0.026	0.23	0.38	
A08	OK	Beta	603438	20.00	20.06	0.294	0.030	0.23	0.38	
A09	OK	Beta	603439	20.00	20.06	0.261	0.026	0.23	0.38	
A10	OK	Beta	603440	20.00	20.06	0.258	0.027	0.23	0.38	
A11	OK	Beta	603441	20.00	20.06	0.285	0.030	0.23	0.38	
A12	OK	Beta	603442	20.00	20.06	0.263	0 027	0.23	0.38	
A13	OK	Beta	603443	20.00	20.06	0.266	0.027	0.23	0.38	
A14	OK	Beta	603444	20.00	20.06	0.264	0.027	0.23	0.38	
A15	OK	Beta	603445	20.00	20.06	0.293	0.030	0.23	0.38	
A16	OK	Beta	603446	20.00	20.07	0.252	0.026	0.23	0.38	
A17	OK	Beta	603447	20.00	20.10	0.267	0.027	0.23	0.38	
A18	OK	Beta	603448	20.00	20.09	0.280	0.028	0.23	0.38	
A19	OK	Beta	603449	20.00	20.09	0.295	0.030	0.23	0.38	
A20	OK	Beta	603450	20.00	20.12	0.267	0.027	0.23	0.38	
A21	OK	Beta	603451	20.00	20.09	0.286	0 029	0.23	0.38	
A22	OK	Beta	603452	20.00	20.09	0.284	0.029	0.23	0.38	
A23	OK	Beta	603453	20.00	20.10	0.298	0.030	0.23	0.38	
A24	OK	Beta	603454	20.00	20.10	0.265	0.027	0.23	0.38	
A25	BAD									
A26	OK	Beta	603456	20.00	20.10	0.253	0.026	0.23	0.38	
A27	OK	Beta	603457	20.00	20.10	0.273	0.028	0.23	0.38	
A28	OK	Beta	603458	20.00	20.09	0.303	0.031	0.23	0.38	
A29	OK	Beta	603459	20.00	20.10	0.299	0.030	0.23	0.38	
A30	OK	Beta	603460	20.00	20.10	0.280	0.028	0.23	0.38	
A31	OK	Beta	603461	20.02	20.11	0.295	0.030	0.23	0.38	
A32	OFF									

0015

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Efficiency Calibration Report

Batch ID: AFCS3_2000_01118
Collecton Date/Time: 03/21/2000 06:58:00
System: 3
Transport: A
Analyst: Kathy Hagglund

QC Flag Legend: B - Beta Eff exceeded control limits
A - Alpha Eff exceeded control limits
X - Detector did not complete collection

K M Hagglund 3/21/00
Analyst Date

L.B. Newton 3-21-00
QA Officer Date

Detector	Detector Status	Source Type	Source ID	Live Time	True Time	Eff.	Unc 2s	LCL	UCL	QC Flag
A01	OK									
A02	OK									
A03	OK									
A04	OK									
A05	OK									
A06	OK									
A07	OK									
A08	OK									
A09	OK									
A10	OK									
A11	OK									
A12	OK									
A13	OK									
A14	OK									
A15	OK									
A16	OK									
A17	OK									
A18	OK									
A19	OK									
A20	OK									
A21	OK									
A22	OK									
A23	OK									
A24	OK									
A25	OK	Alpha	2589-99	20.00	20.13	0.146	0.003	0.11	0.19	
A26	OK									
A27	OK									
A28	OK									
A29	OK									
A30	OK									
A31	OK									
A32	OFF									

0016

Efficiency Calibration Report

Batch ID: AFCS3_2000_01119
Collecton Date/Time: 03/21/2000 07:20:56
System: 3
Transport: A
Analyst: Kathy Hagglund

QC Flag Legend: B - Beta Eff exceeded control limits
A - Alpha Eff exceeded control limits
X - Detector did not complete collection

K M Hagglund 3/21/00
Analyst Date

L B. Newton 3-21-00
QA Officer Date

Detector	Detector Status	Source Type	Source ID	Live Time	True Time	Eff.	Unc 2s	LCL	UCL	QC Flag
A01	OK									
A02	OK									
A03	OK									
A04	OK									
A05	OK									
A06	OK									
A07	OK									
A08	OK									
A09	OK									
A10	OK									
A11	OK									
A12	OK									
A13	OK									
A14	OK									
A15	OK									
A16	OK									
A17	OK									
A18	OK									
A19	OK									
A20	OK									
A21	OK									
A22	OK									
A23	OK									
A24	OK									
A25	OK	Beta	603455	20.00	20.11	0.283	0.029	0.23	0.38	
A26	OK									
A27	OK									
A28	OK									
A29	OK									
A30	OK									
A31	OK									
A32	OFF									

0017

INSTRUMENT BACKGROUND, EFFICIENCY CHECK DATA, BENCHSHEETS and SAMPLE RESULTS

Batch ID: AFCS3_2000_01411
Collecton Date/Time: 04/08/2000 08:12:38
System: 3
Transport: A
Analyst: Pat Brazee

QC Flag Legend: B - Beta CPM exceeded control limits
A - Alpha CPM exceeded control limits
X - Detector did not complete collection

Analyst 04/10/00 Date

QA Officer 4/10/00 Date

Detector	Detector Status	Filter Type	Live Time	True Time	Beta				Alpha				QC Flag
					CPM	Unc	LCL	UCL	CPM	Unc	LCL	UCL	
A01	OK	Air Filter	720.00	720.08	16.165	0.294	10.00	30.00	0.053	0.017	0.03	0.15	
A02	OK	Air Filter	720.00	720.08	14.686	0.280	10.00	30.00	0.063	0.018	0.03	0.15	
A03	OK	Air Filter	720.00	720.08	15.389	0.287	10.00	30.00	0.081	0.021	0.03	0.15	
A04	OK	Air Filter	720.00	720.08	15.060	0.283	10.00	30.00	0.065	0.019	0.03	0.15	
A05	OK	Air Filter	720.00	720.08	15.275	0.285	10.00	30.00	0.063	0.018	0.03	0.15	
A06	OK	Air Filter	720.00	720.08	15.250	0.285	10.00	30.00	0.051	0.017	0.03	0.15	
A07	OK	Air Filter	720.00	720.08	15.115	0.284	10.00	30.00	0.069	0.019	0.03	0.15	
A08	OK	Air Filter	720.00	720.08	15.943	0.292	10.00	30.00	0.064	0.018	0.03	0.15	
A09	OK	Air Filter	720.00	720.08	17.435	0.305	10.00	30.00	0.063	0.018	0.03	0.15	
A10	OK	Air Filter	720.00	720.08	14.336	0.277	10.00	30.00	0.063	0.018	0.03	0.15	
A11	OK	Air Filter	720.00	720.08	14.218	0.275	10.00	30.00	0.051	0.017	0.03	0.15	
A12	OK	Air Filter	720.00	720.08	13.742	0.271	10.00	30.00	0.079	0.021	0.03	0.15	
A13	OK	Air Filter	720.00	720.08	14.194	0.275	10.00	30.00	0.050	0.016	0.03	0.15	
A14	OK	Air Filter	720.00	720.08	13.467	0.268	10.00	30.00	0.053	0.017	0.03	0.15	
A15	OK	Air Filter	720.00	720.08	15.082	0.284	10.00	30.00	0.088	0.022	0.03	0.15	
A16	OK	Air Filter	720.00	720.08	15.660	0.289	10.00	30.00	0.058	0.018	0.03	0.15	
A17	OK	Air Filter	720.00	721.99	21.876	0.342	10.00	30.00	0.064	0.018	0.03	0.15	
A18	OK	Air Filter	720.00	721.99	20.146	0.328	10.00	30.00	0.058	0.018	0.03	0.15	
A19	OK	Air Filter	720.00	721.99	19.878	0.326	10.00	30.00	0.063	0.018	0.03	0.15	
A20	OK	Air Filter	720.00	721.99	18.294	0.312	10.00	30.00	0.050	0.016	0.03	0.15	
A21	OK	Air Filter	720.00	721.99	19.742	0.325	10.00	30.00	0.058	0.018	0.03	0.15	
A22	OK	Air Filter	720.00	721.99	18.646	0.315	10.00	30.00	0.051	0.017	0.03	0.15	
A23	OK	Air Filter	720.00	721.99	18.781	0.317	10.00	30.00	0.053	0.017	0.03	0.15	
A24	OK	Air Filter	720.00	721.99	21.442	0.338	10.00	30.00	0.063	0.018	0.03	0.15	
A25	OK	Air Filter	720.00	721.99	23.513	0.354	10.00	30.00	0.083	0.021	0.03	0.15	
A26	OK	Ambient	720.00	721.99	20.499	0.331	10.00	30.00	0.060	0.018	0.03	0.15	
A27	OK	Ambient	720.00	721.99	19.156	0.320	10.00	30.00	0.056	0.017	0.03	0.15	
A28	OK	Ambient	720.00	721.99	20.118	0.328	10.00	30.00	0.057	0.017	0.03	0.15	
A29	OK	Ambient	720.00	721.99	19.340	0.321	10.00	30.00	0.064	0.018	0.03	0.15	
A30	OK	Ambient	720.00	721.99	18.146	0.311	10.00	30.00	0.054	0.017	0.03	0.15	
A31	OK	Ambient	720.00	721.99	20.165	0.328	10.00	30.00	0.054	0.017	0.03	0.15	
A32	OFF												

0019

Batch ID: AFCS3_2000_01413
Collecton Date/Time: 04/10/2000 07:20:58
System: 3
Transport: A
Analyst: Leonard Moomaw

QC Flag Legend: B - Beta Eff exceeded control limits
A - Alpha Eff exceeded control limits
X - Detector did not complete collection

04/10/00
Analyst Date

4/10/00
QA Officer Date

Detector	Detector Status	Source Type	Source ID	Live Time	True Time	Eff.	Unc 2s	LCL	UCL	QC Flag
A01	OK	Alpha	2565-99	5.00	5.15	0.145	0.003	0.10	0.20	
A02	OK	Alpha	2566-99	5.00	5.15	0.159	0.004	0.10	0.20	
A03	OK	Alpha	2567-99	5.00	5.15	0.167	0.004	0.10	0.20	
A04	OK	Alpha	2568-99	5.00	5.15	0.142	0.003	0.10	0.20	
A05	OK	Alpha	2569-99	5.00	5.15	0.142	0.003	0.10	0.20	
A06	OK	Alpha	2570-99	5.00	5.15	0.157	0.004	0.10	0.20	
A07	OK	Alpha	2571-99	5.00	5.15	0.159	0.004	0.10	0.20	
A08	OK	Alpha	2572-99	5.00	5.15	0.151	0.003	0.10	0.20	
A09	OK	Alpha	2573-99	5.00	5.15	0.148	0.004	0.10	0.20	
A10	OK	Alpha	2574-99	5.00	5.15	0.149	0.003	0.10	0.20	
A11	OK	Alpha	2575-99	5.00	5.15	0.156	0.004	0.10	0.20	
A12	OK	Alpha	2576-99	5.00	5.15	0.171	0.004	0.10	0.20	
A13	OK	Alpha	2577-99	5.00	5.15	0.152	0.004	0.10	0.20	
A14	OK	Alpha	2578-99	5.00	5.15	0.163	0.004	0.10	0.20	
A15	OK	Alpha	2579-99	5.00	5.15	0.152	0.003	0.10	0.20	
A16	OK	Alpha	2580-99	5.00	5.15	0.147	0.003	0.10	0.20	
A17	OK	Alpha	2581-99	5.00	5.16	0.132	0.003	0.10	0.20	
A18	OK	Alpha	2582-99	5.00	5.16	0.149	0.003	0.10	0.20	
A19	OK	Alpha	2583-99	5.00	5.16	0.159	0.004	0.10	0.20	
A20	OK	Alpha	2584-99	5.00	5.16	0.154	0.004	0.10	0.20	
A21	OK	Alpha	2585-99	5.00	5.16	0.156	0.004	0.10	0.20	
A22	OK	Alpha	2586-99	5.00	5.16	0.165	0.004	0.10	0.20	
A23	OK	Alpha	2587-99	5.00	5.16	0.160	0.004	0.10	0.20	
A24	OK	Alpha	2588-99	5.00	5.16	0.155	0.004	0.10	0.20	
A25	OK	Alpha	2589-99	5.00	5.16	0.144	0.003	0.10	0.20	
A26	OK	Alpha	2590-99	5.00	5.16	0.146	0.003	0.10	0.20	
A27	OK	Alpha	2591-99	5.00	5.16	0.139	0.003	0.10	0.20	
A28	OK	Alpha	2592-99	5.00	5.16	0.136	0.003	0.10	0.20	
A29	OK	Alpha	2593-99	5.00	5.16	0.143	0.003	0.10	0.20	
A30	OK	Alpha	2594-99	5.00	5.16	0.147	0.003	0.10	0.20	
A31	OK	Alpha	2595-99	5.00	5.16	0.161	0.004	0.10	0.20	
A32	OFF									

0020

Batch ID: AFCS3_2000_01416
Collecton Date/Time: 04/10/2000 07:46:34
System: 3
Transport: A
Analyst: Leonard Moomaw

QC Flag Legend: B - Beta Eff exceeded control limits
A - Alpha Eff exceeded control limits
X - Detector did not complete collection

Analyst 04/10/00 Date

QA Officer 4/10/00 Date

COPY

Detector	Detector Status	Source Type	Source ID	Live Time	True Time	Eff.	Unc 2s	LCL	UCL	QC Flag
A01	OK	Beta	603431	10.00	10.03	0.250	0.026	0.20	0.40	
A02	OK	Beta	603432	10.00	10.03	0.266	0.028	0.20	0.40	
A03	OK	Beta	603433	10.00	10.03	0.283	0.029	0.20	0.40	
A04	OK	Beta	603434	10.00	10.03	0.269	0.029	0.20	0.40	
A05	OK	Beta	603435	10.00	10.03	0.270	0.028	0.20	0.40	
A06	OK	Beta	603436	10.00	10.03	0.272	0.029	0.20	0.40	
A07	OK	Beta	603437	10.00	10.03	0.256	0.027	0.20	0.40	
A08	OK	Beta	603438	10.00	10.03	0.297	0.031	0.20	0.40	
A09	OK	Beta	603439	10.00	10.03	0.268	0.027	0.20	0.40	
A10	OK	Beta	603440	10.00	10.03	0.271	0.028	0.20	0.40	
A11	OK	Beta	603441	10.00	10.03	0.289	0.031	0.20	0.40	
A12	OK	Beta	603442	10.00	10.03	0.270	0.028	0.20	0.40	
A13	OK	Beta	603443	10.00	10.03	0.272	0.029	0.20	0.40	
A14	OK	Beta	603444	10.00	10.03	0.260	0.027	0.20	0.40	
A15	OK	Beta	603445	10.00	10.03	0.300	0.032	0.20	0.40	
A16	OK	Beta	603446	10.00	10.03	0.259	0.028	0.20	0.40	
A17	OK	Beta	603447	10.00	10.07	0.272	0.028	0.20	0.40	
A18	OK	Beta	603448	10.00	10.07	0.269	0.027	0.20	0.40	
A19	OK	Beta	603449	10.00	10.07	0.294	0.030	0.20	0.40	
A20	OK	Beta	603450	10.00	10.07	0.288	0.030	0.20	0.40	
A21	OK	Beta	603451	10.00	10.07	0.292	0.030	0.20	0.40	
A22	OK	Beta	603452	10.00	10.07	0.286	0.029	0.20	0.40	
A23	OK	Beta	603453	10.00	10.07	0.307	0.031	0.20	0.40	
A24	OK	Beta	603454	10.00	10.07	0.269	0.027	0.20	0.40	
A25	OK	Beta	603455	10.00	10.07	0.277	0.028	0.20	0.40	
A26	OK	Beta	603456	10.00	10.07	0.257	0.026	0.20	0.40	
A27	OK	Beta	603457	10.00	10.07	0.274	0.028	0.20	0.40	
A28	OK	Beta	603458	10.00	10.07	0.305	0.031	0.20	0.40	
A29	OK	Beta	603459	10.00	10.07	0.314	0.032	0.20	0.40	
A30	OK	Beta	603460	10.00	10.07	0.284	0.029	0.20	0.40	
A31	OK	Beta	603461	10.00	10.07	0.297	0.030	0.20	0.40	
A32	OFF									

0021

ROCKY FLATS AIR FILTER SAMPLES

LOG-IN REPORT/BENCHSHEET

SDG No.: 1000595

Route: MFG

Building: N/A

LIC: _____

Date Logged In: 04/09/2000 13:48

Logged In By: Kathy Hagglund

Procedure ATP-021

Analyst: R.C. Meaney

INTERNAL CHAIN OF CUSTODY

Transfer Information			Date/Time	By	Comments
105	to	107	4/10/2000 0700	RaB	
107	to	110 A5	4/10/2000 1000	RaB	
	to				
	to				
	to				
	to				

Lab Sample ID	Cust Sample ID	Sample On Date	Sample Off Date	Log-In Status	Revised Status	Analysis Notes
1000595-01	AQM-TB-H1	04/06/2000	04/06/2000	In Service		
1000595-02	AQM-TB-H2	04/06/2000	04/06/2000	In Service		
1000595-03	AQM-TB-H3	04/06/2000	04/06/2000	In Service		
1000595-04	AQM-TB-HB	04/06/2000	04/06/2000	In Service		

0022

23

AFCS Ver. 1.0.0

Air Filter Analysis Report

RIN: 00R0975
SDG No: 1000595
Building: N/A
Route: MFG
Analysis Date: 04/10/2000

System: 3
Activity Units: DPM
Unc. Reported at: 95%
MDA Reported at: 95%
Protocol No.: 16
Protocol Desc.: Ambient Specials
Analysis Batch(es): 'AFCS3_2000_01419'

Legend: A - Alpha Activity > 0
B - Beta Activity > 0
D - Deg. Alpha Activity > 1
H - Hi Energy Activity > 0
* - No results
** - Multiple results

Leonard Moomaw 04/10/00
Analyst(s) Date

Patricia Newton 4/10/00
QA Officer Date

Sample ID	Sample Pt	On Date	Off Date	Detector	Volume cu. m	Beta				Alpha				QC Flag
						Activity	Cnt. Unc.	TPU	MDA	Activity	Cnt. Unc.	TPU	MDA	
AQM-TB-H1	SW Buffer	04/06/2000	04/06/2000	A26	0	4.888	4.876	4.876	8.103	2.034	1.297	1.357	1.505	
AQM-TB-H2	SW Buffer	04/06/2000	04/06/2000	A27	0	2.848	4.310	4.310	7.251	0.114	0.694	0.694	1.533	
AQM-TB-H3	SW Buffer	04/06/2000	04/06/2000	A28	0	1.535	3.941	3.941	6.689	0.101	0.704	0.705	1.569	
AQM-TB-HB	SW Buffer	04/06/2000	04/06/2000	A29	0	0.479	3.893	3.893	6.663	-0.297	0.483	0.487	1.523	

0023

EDD HARDCOPY

25

RIN	Location	Date/Time Sample On	Date/Time Sample Off	Beta				Alpha				Units	QC Flag
				Activity	Activity Unc	MDA	Prop Unc	Activity	Activity Unc	MDA	Prop Unc		
00R0975	M-TB-H1 - SW Buff	04/06/2000	04/06/2000	4.888	4.876	8.103	4.876	2.034	1.297	1.505	1.357	DPM	
00R0975	M-TB-H2 - SW Buff	04/06/2000	04/06/2000	2.848	4.310	7.251	4.310	0.114	0.694	1.533	0.694	DPM	
00R0975	M-TB-H3 - SW Buff	04/06/2000	04/06/2000	1.535	3.941	6.689	3.941	0.101	0.704	1.569	0.705	DPM	
00R0975	M-TB-HB - SW Buf	04/06/2000	04/06/2000	0.479	3.893	6.663	3.893	-0.297	0.483	1.523	0.487	DPM	

0925

Subject: EDD for RIN 00R0975
Date: Mon, 10 Apr 2000 15:06:37 -0600
From: Kathy Hagglund <thermonu@indra.com>
To: JoAnn Euler <JoAnn.Euler@rfets.gov>

JoAnn,

Here is the resubmitted EDD for RIN 00R0975.

Kathy

00R0975	AQM-TB-H1 - SW Buffer	04/06/2000 12:00:00 PM	04/06/2000 12:00:00 PM	4.88
00R0975	AQM-TB-H2 - SW Buffer	04/06/2000 12:00:00 PM	04/06/2000 12:00:00 PM	2.84
00R0975	AQM-TB-H3 - SW Buffer	04/06/2000 12:00:00 PM	04/06/2000 12:00:00 PM	1.53
00R0975	AQM-TB-HB - SW Buffer	04/06/2000 12:00:00 PM	04/06/2000 12:00:00 PM	0.47

0026

Air Filter Analysis Report

RIN: 00R0975
SDG No: 1000595
Building: N/A
Route: MFG
Analysis Date: 04/10/2000

System: 3
Activity Units: DPM
Unc. Reported at: 95%
MDA Reported at: 95%
Protocol No.: 16
Protocol Desc.: Ambient Specials
Analysis Batch(es): 'AFCS3_2000_01419'

Legend: A - Alpha Activity > 0
B - Beta Activity > 0
D - Deg. Alpha Activity > 1
H - Hi Energy Activity > 0
* - No results
** - Multiple results

Leonard Moomaw 04/10/00
Analyst(s) Date

Patricia Newton for D. Hunter 4/10/00
QA Officer Date

Sample ID	Sample PI	On Date	Off Date	Detector	Volume cu. m	Beta				Alpha				QC Flag
						Activity	Cnt. Unc.	TPU	MDA	Activity	Cnt. Unc.	TPU	MDA	
AQM-TB-H1	SW Buffer	04/06/2000	04/06/2000	A26	0	4.888	4.876	4.876	8.103	2.034	1.297	1.357	1.505	
AQM-TB-H2	SW Buffer	04/06/2000	04/06/2000	A27	0	2.848	4.310	4.310	7.251	0.114	0.694	0.694	1.533	
AQM-TB-H3	SW Buffer	04/06/2000	04/06/2000	A28	0	1.535	3.941	3.941	6.689	0.101	0.704	0.705	1.569	
AQM-TB-HB	SW Buffer	04/06/2000	04/06/2000	A29	0	0.479	3.893	3.893	6.663	-0.297	0.483	0.487	1.523	

Preliminary Data only
Initials JH Date 4/10/00